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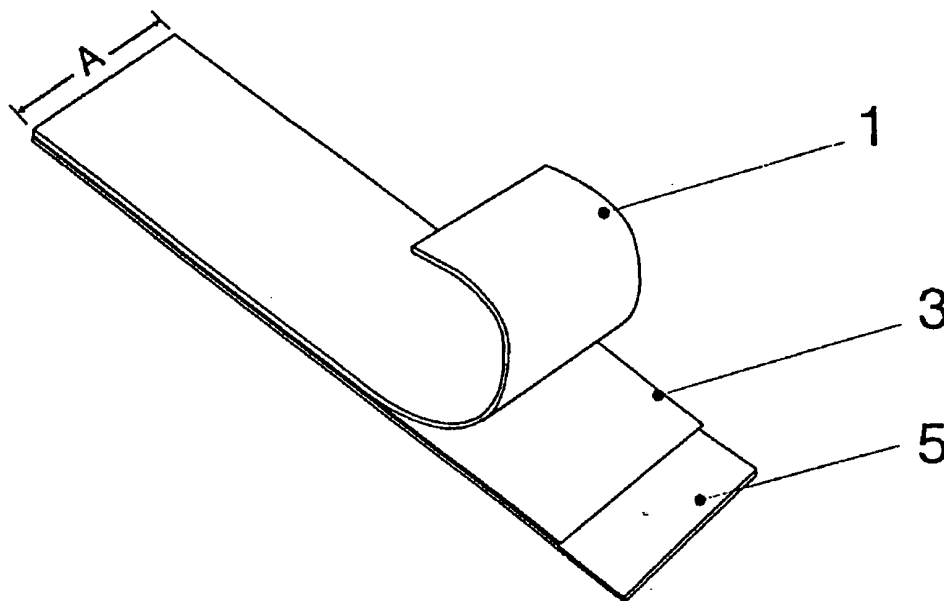
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(51) Int.Cl.<sup>6</sup> G09F 3/04, A61F 13/56, F16B 2/00, A44B 18/00

(54) **DISPOSITIF DE FIXATION BASE SUR DU RUBAN**

**ELECTROSTATIQUE**

(54) **FIXING DEVICE BASED ON ELECTROSTATIC TAPE**



## FIXING DEVICE BASED ON ELECTROSTATIC TAPE

This invention relates to means for fixing material to be exhibited on a polished surface. More particularly, the present invention is  
5 concerned with an arrangement which enables to post advertising material, drawings, photos, and the like on a polished surface such as glass panes, mirrors, metal and plastic surfaces, and from which they are easily removed without leaving any trace thereon. According to a  
10 modification, the invention also relates to the use of electrostatic vinyl plastic as a means for fastening, especially for diapers or the like.

I have noted that printed electrostatic vinyl is widely used as decorative  
or advertising element to decorate windows or store showcases. However, this vinyl is much more costly than standard postings which  
15 are made of paper or cardboard.

On the other hand, postings, restaurant menus, information of all kind in sheet or cardboard form and fixed in store showcases use the usually known adhesive tapes such as Scotch Tape®. When a adhesive tape is used, after a while, the glue thereon dries up on the surface such  
20 as glass and leaves residues thereon which have to be cleaned. In addition, postings are not easy to move on the polished surface because the adhesive tape is hard to keep in place. Also, postings are not often recovered after use, because they are usually damaged when removing them.

25 It is also well known that when two pieces of flexible electrostatic vinyl are joined together, an important phenomenon of suction takes place. The two pieces efficiently adhere to one another and the resulting shear strength is great, while the peeling force holding them together is weak.

It is therefore an object of the present invention to provide a new principle for fixing postings or the like on a polished surface.

It is another object of the invention to provide a product enabling to easily lay down postings and eliminate problems associated with residues which are left on the surface by the adhesives normally used for this type of utilization.

It is another object of the present invention to provide a fastening means by utilizing two pieces of electrostatic vinyl and joining them together.

10        These and other objects of the invention may be achieved by providing a combination for removably fixing a material to be exhibited on a polished surface which comprises a sheet of electrostatic vinyl, a sheet of said material and means enabling to fix said material in adhesive contact with the sheet of electrostatic material.

15        The invention also relates to a fastening means comprising a pair of bands made of electrostatic vinyl, one end of each band fixed to an article to be fastened, the opposite ends being arranged to overlap one another so as to be easily peelable, but strongly secured together with high shear strength.

20        The invention is illustrated but is not limited by the enclosed drawings , in which

FIGURE 1 is a perspective view of a fastening device used for fixing a poster on a polished surface;

25        FIGURE 2 is a perspective view showing a modification of the device illustrated in FIGURE 1;

FIGURE 3 is a view showing an application of the device of FIGURE 1;

FIGURE 4 is a perspective view of a fastening device according to another embodiment;

FIGURE 5 is a view showing an application of the device of FIGURE 4;

5       FIGURE 6 is a perspective view of a fastening device according to a third embodiment;

FIGURE 7 is a view showing an application of the device of FIGURE 6;

10       FIGURE 8 is a perspective view of a fastening device according to a fourth embodiment;

FIGURE 9 is a view showing an application of the device of FIGURE 8;

FIGURE 10 is a cross-section view of a system of fastening for diapers, utilizing two bands of electrostatic vinyl;

15       FIGURES 11 to 13 are perspective views of examples of application of the system illustrated in FIGURE 10.

With reference to FIGURE 1 it will be seen that the starting material is a sheet of electrostatic transparent or opaque vinyl 1 on which an adhesive ribbon 3 is glued thereon by means of a permanent  
20       glue. A paper support 5 is removably glued to the other side of the adhesive ribbon 3. All the components are of the same dimensions. To prepare the posting, the paper support is removed by unpeeling, and poster is applied to the electrostatic vinyl to which it will adhere by means of the permanent glue. The posting is then ready to be applied to  
25       any polished surface from which it can be removed and reapplied anywhere else.

FIGURE 2 is similar to FIGURE 1 except that the electrostatic vinyl 1' is wider than adhesive ribbon 3 and its paper support 5. This increases the adhesion of the electrostatic vinyl on the polished surface, in the vicinity of the ribbon.

5 For an example of application, reference is made to FIGURE 3 wherein the fixing device of FIGURES 1 and 2 is fixed to poster 7 in the form of small rectangular strips 9, and this assembly is thereafter placed on a polished surface 11 by means of the electrostatic vinyl strips 9.

FIGURE 4 shows a combination that includes an electrostatic vinyl, and a paper support 5 which is fixed to the electrostatic sheet by means of a Post-it® type adhesive ribbon 13. To replace the poster it is merely necessary to unpeel it and to fix another poster against the electrostatic vinyl sheet. FIGURE 5 shows an application of this fixing device

15 FIGURE 6 illustrates a posting combination which includes a sheet of electrostatic vinyl 1, and a foam material of medium density 15 which is glued to the electrostatic vinyl by means of an adhesive ribbon 17 (double face or permanent glue). On the other face of the sheet of foam material 15 there is provided another adhesive ribbon 19 (double-  
20 face of permanent glue) to fix thereto a sheet of transfer paper 5 which is then removably fixed to the foam material. To mount the poster on this combination, the transfer paper is removed and the poster is glued to the sheet of foam material. The poster is then ready to be removably applied to any polished surface. FIGURE 7 illustrates an example of  
25 application of this fixing device.

In FIGURE 8 the idea is to replace the poster by a rigid object such as a puzzle, a piece of lettering, or the like. To achieve this, a sheet

of foam material of medium density 21 is applied to the sheet of electrostatic vinyl similarly as in FIGURE 6. However, in this case, a sheet of low density flexible foam material 23 replaces the transfer paper of FIGURE 6. A rigid object 25 is fixed in know manner to the flexible  
5 foam, and the combination can be removably placed on any polished surface. An example of application is illustrated in FIGURE 9.

Turning now to the embodiment illustrated in FIGURE 10, it will be seen that two bands of electrostatic vinyl 27 and 29 are fixed in known manner as shown at one end thereon on parts of a diaper to be  
10 joined together. To firmly secure the diaper, it is merely sufficient to overlap the bands of electrostatic vinyl, which will be easily peelable to unfasten the diaper, but will be strongly secured together with high shear strength. Examples of applications are given in FIGURES 11 to 13, namely an envelope, a diaper, and a belt provided with this fastening  
15 system.

### CLAIMS

1. Combination for removably fixing a material to be exhibited on a polished surface which comprises a sheet of electrostatic vinyl, a sheet of said material and means enabling to fix said sheet of material in adhesive contact with the sheet of electrostatic vinyl.  
5
2. Fastening means comprising a pair of bands made of electrostatic vinyl, one end of each said band fixed to an article to be fastened, the opposite ends being arranged to overlap one another so as  
10 to be easily peelable, but strongly secured together with high shear strength.

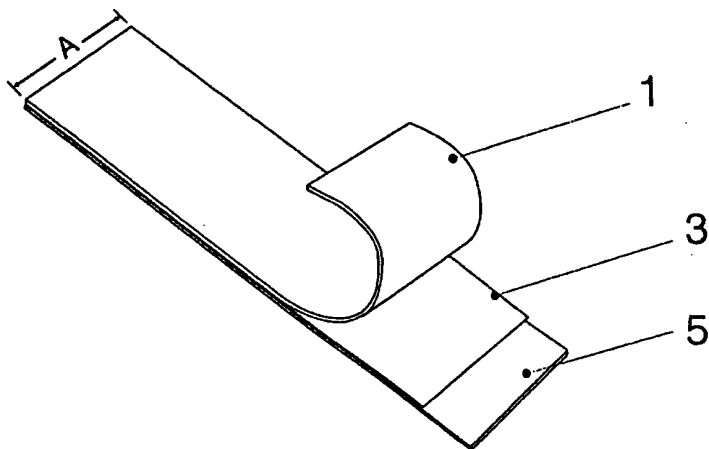


FIG.1

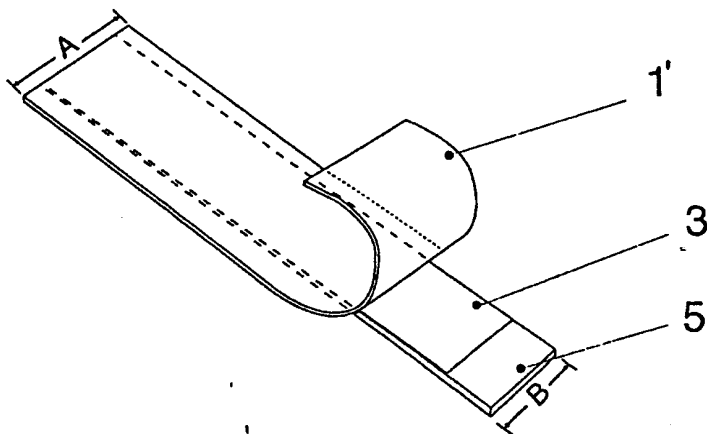


FIG.2

*D/S/H* 27/08/98.



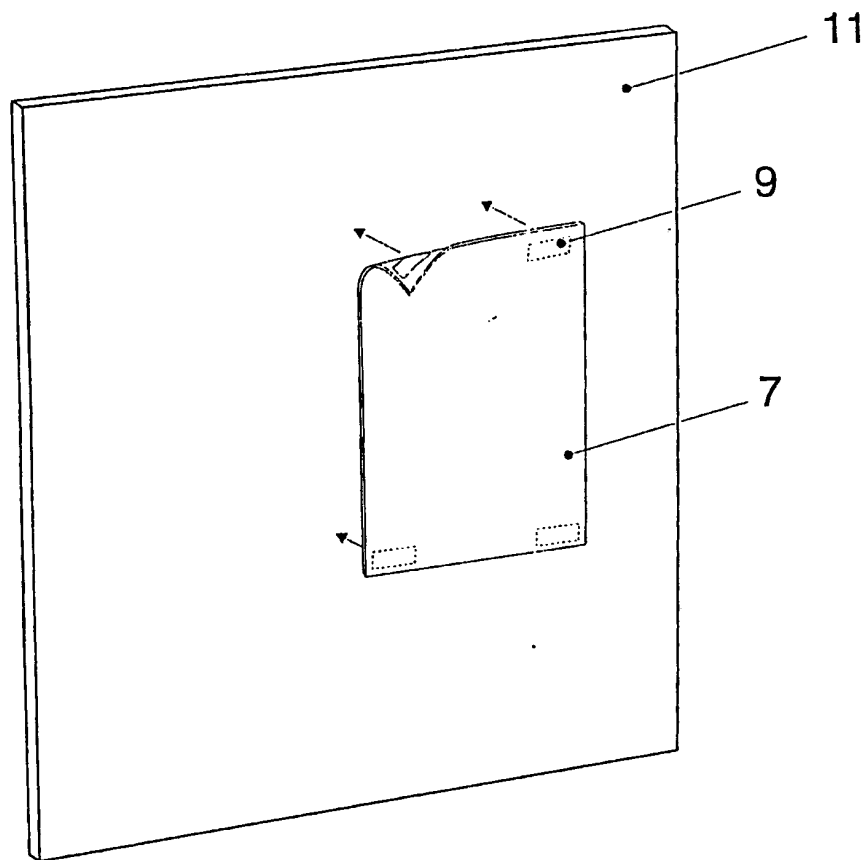


FIG.3

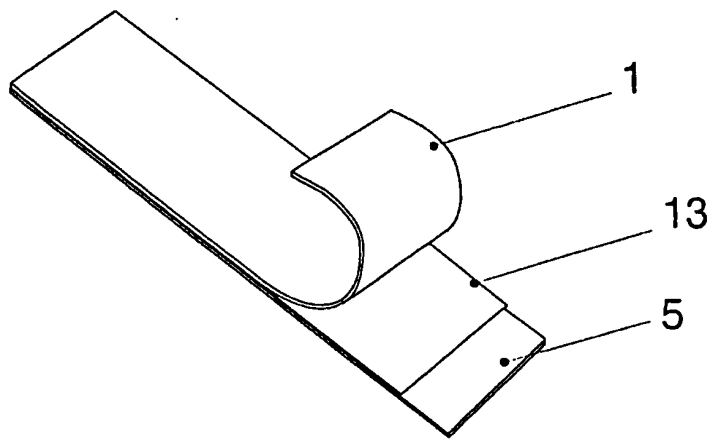


FIG. 4

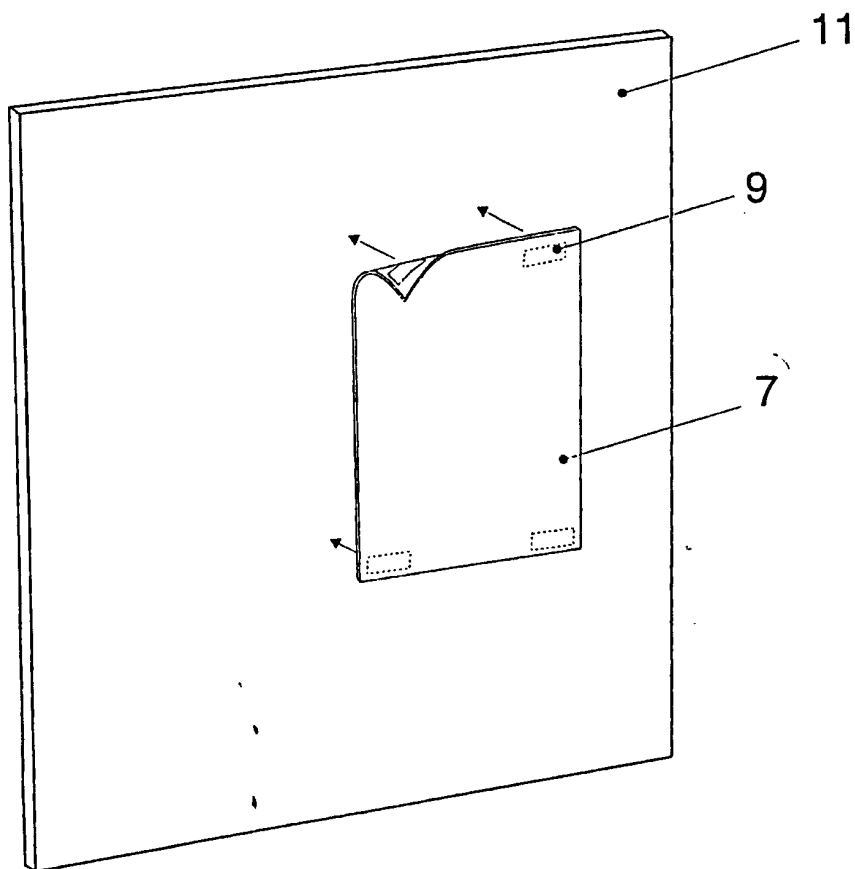


FIG. 5

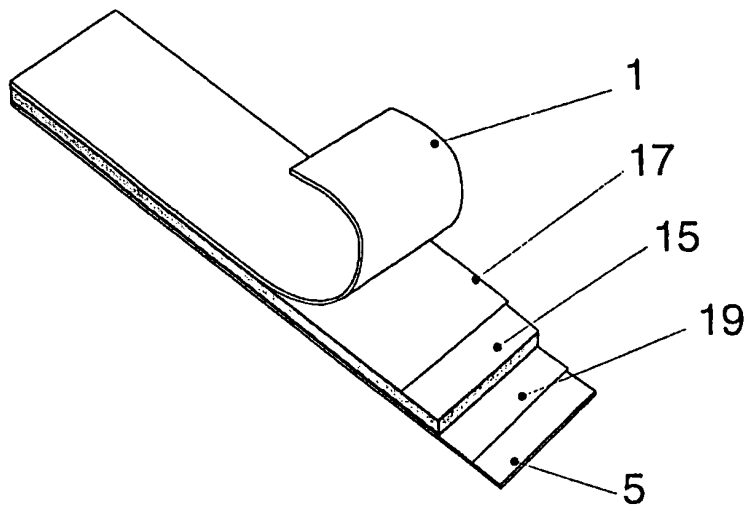


FIG. 6

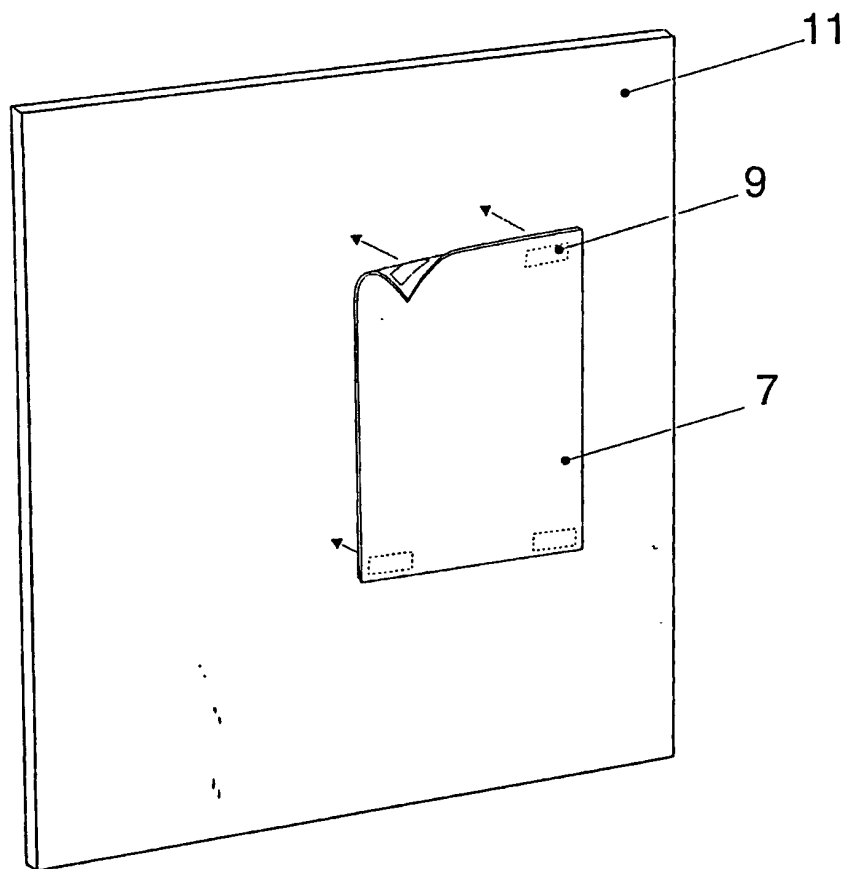


FIG. 7

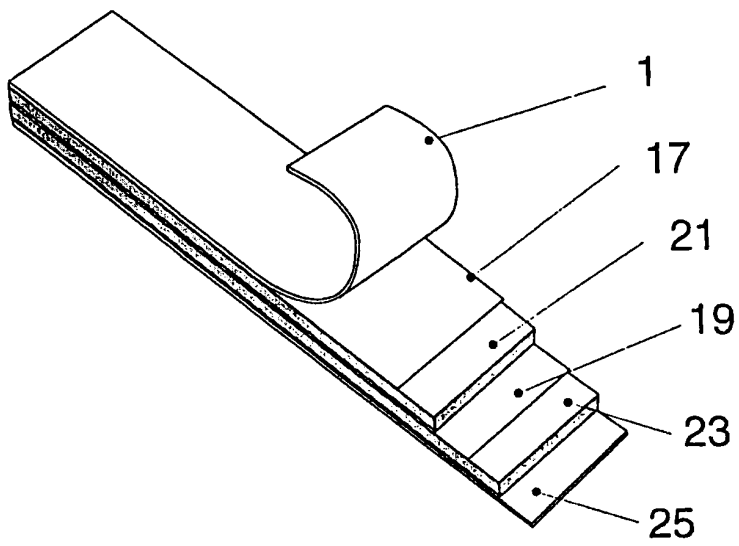


FIG. 8

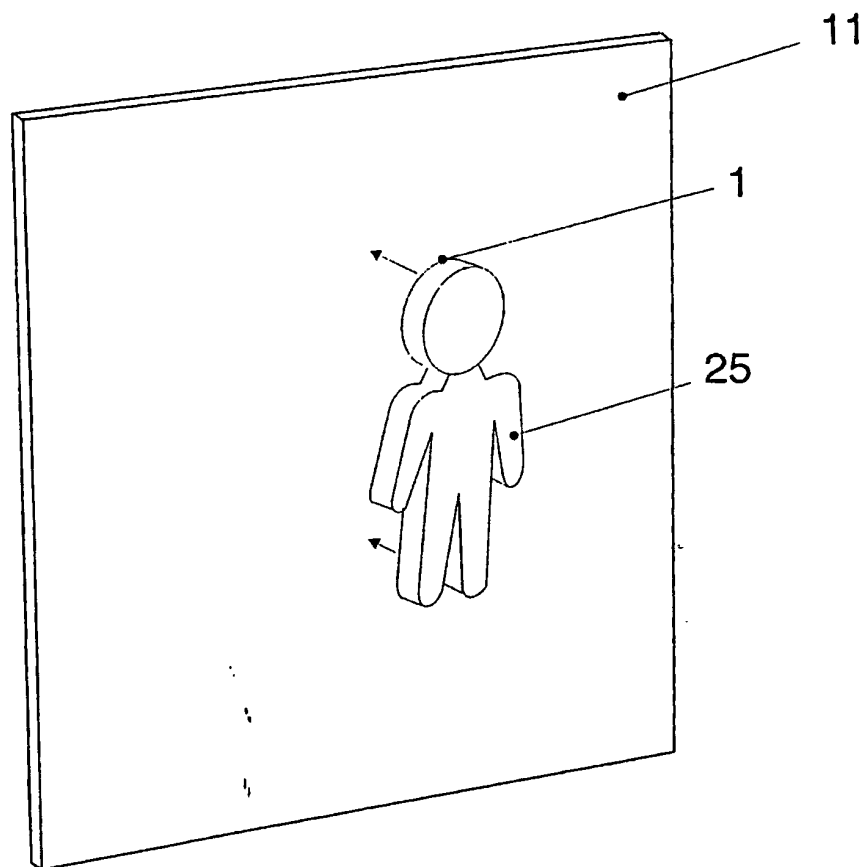


FIG. 9

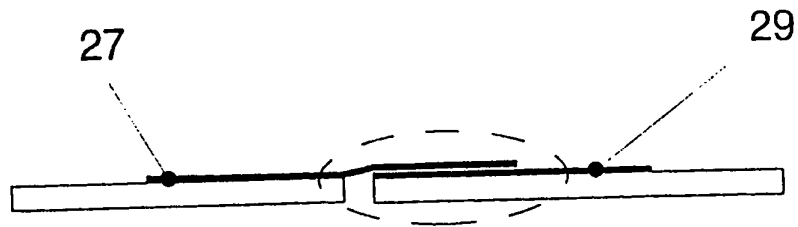


FIG. 10

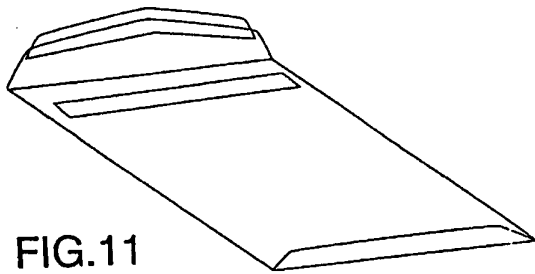


FIG. 11

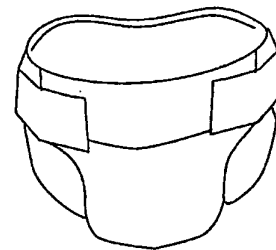


FIG. 12

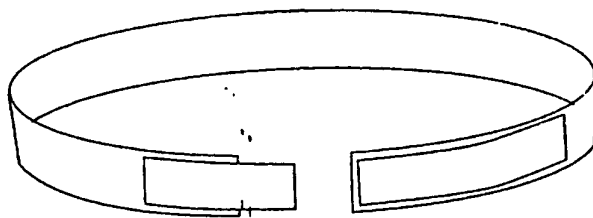


FIG. 13